

INSTALLATION AND OPERATING INSTRUCTIONS

PHILCO

REG. U. S. PAT. OFF.

TRANSITONE

MODEL 818

THE PHILCO AUTO RADIO MODEL 818 is Philco's newest DeLuxe automobile radio. It is a highly developed super-heterodyne with a large electro-dynamic speaker built in the Receiver and an additional electro-dynamic speaker for installation on the header bar above the wind-shield. This unique use of two electro-dynamic speakers, together with all the modern features required in such a DeLuxe instrument gives better reproduction and sound distribution in an automobile than has ever been obtained before.

THIS NEW RECEIVER IS EQUIPPED WITH AN ADJUSTABLE ANTENNA STAGE WHICH MAKES IT POSSIBLE TO OPERATE THE RECEIVER AT MAXIMUM EFFICIENCY ON ANY ROOF-TYPE OR UNDER-CAR-TYPE ANTENNA.

The Receiver, the full-size speaker and the new, improved full-wave Philco Vibrator are housed in a rugged, compact, fully shielded container, designed especially for quick and easy installation on the dash of all automobiles with two "Tee" bolts. The installation in most cars can be made easily above the steering column. The metal housing of the overhead speaker is finished in a neutral shade to match the interior car finish and is equipped with an adjustable mounting bracket so that the speaker can be installed in practically all cars.

All tubes used are the latest Philco high-efficiency tubes, designed especially for automobile radio. Some of these tubes each perform the functions formerly requiring two or three

tubes, thereby effecting greater tube economy, reducing the number of tubes necessary for satisfactory operation, and also reducing the amount of current taken from the car battery to a minimum.

The speaker panel of the Receiver is easily removed so that tubes and vibrator are accessible for service.

Philco's system of automatic volume control used in this Receiver gives smooth elastic control, counteracts fading while driving along, and prevents blasting of local stations.

Philco's full range tone control permits the selection of the tone desired.

This new all-electric Receiver is equipped with improved interference filters and especially designed shielding to eliminate motor interference, making it possible to install it quickly and easily.

The new streamline "wide vision" control can be installed on the edge of the instrument board. This control unit is exceptionally attractive and is designed to blend harmoniously with the instrument boards of practically all cars. The radio switch, tuning control, volume control, tone control and sensitivity switch are all right at the finger tips on the control unit.

There are only two connections to make, one to the antenna, and the other to the ammeter binding post.

Now, more than ever, **THE NEW PHILCO AUTO RADIO IS EASY TO INSTALL** and is a **PLEASURE TO OPERATE.**

GENERAL INSTRUCTIONS

ANTENNA—In cars equipped with a top antenna, the lead-in is generally brought down one of the windshield pillars and coiled behind the cowl trim panel. In such cases, the Receiver antenna lead must be spliced to the antenna lead-in as close as possible to the corner post. Ground the shield pigtail to the cowl panel under a convenient screw.

In cars having an all-metal turret top, the Philco special Under-car Antenna (Part No. 45-1128 Kit) should be installed. The shielded antenna lead-in furnished with the kit must be brought up through the floor of the car to the Receiver. Keep the lead-in out of the motor compartment. Complete instructions are furnished with the antenna kit.

RECEIVER INSTALLATION—The Receiver must be installed under the cowl on the dash. Be sure that in the location selected, there is ample foot room and that the Receiver does not in any way interfere with operation of the control pedals and ventilators. The Receiver can be installed on the right side of the dash, in the center or on the left side, above the steering column. Figure 3 shows a typical installation with the Receiver on the left side.

A cardboard template is provided so that the mounting bolt hole locations can be easily and accurately marked on the dash. The Receiver fastens to the dash with two "Tee" bolts. (See Figure 1). Drill two 7/16 inch holes and loosely assemble the "Tee" bolts. Install the Receiver on the dash and hook the "Tee" bolts into the brackets on the Receiver. Tighten the Receiver securely in place.

OVERHEAD SPEAKER INSTALLATION—Take out the adjustment screws on the side of the speaker housing. Fit the speaker in place against the headlining with the adjustable mounting bracket flush against the header-bar in the center above the windshield. Then pull the bracket out as far as possible so that it can be used as a template for marking the location of the mounting screw holes. Drill four holes in the metal header-bar brace, using a No. 29 drill, and fasten the bracket securely to the header with four No. 8 slotted hex-head self-tapping screws.

Place the rubber grommet on the speaker cable about six inches from the terminal end. The colors of the wires in the speaker cable correspond with the color marks on the speaker panel terminals to which they must be connected. After the cable is connected to the speaker, the grommet should be placed in the "U" slot in the edge of the speaker housing. Push the

speaker against the headlining and tighten the adjustment screws on the side of the speaker housing.

The cable should be dressed in back of the upper edge of the header-bar trim and brought over to the right corner post. Dress the cable down along the windshield moulding, fastening with cable clips wherever required. Connect the speaker plug into the outlet in the side of the Receiver housing. Dress the slack cable and fasten in place.

On some of the 1935 and 1936 cars, there is a fish wire in the front corner post for drawing the overhead speaker cable up the corner post and across the front, in back of the header panel. On General Motors cars, the fish wire is brought down the left corner post and is fastened at the top in the center, behind the header. Gently pull down the top edge of the header trim. This will expose the end of the fish wire which can then be used for drawing the speaker cable up the left corner post.

CONTROL UNIT—The control unit fastens to the bottom edge of the instrument board. (Figure 3 shows a typical installation). Drill two holes in the instrument board flange in the desired location and fasten the control mounting bracket securely by means of bolts and nuts. Seat the volume control shaft end in the proper bushing on the Receiver housing and fasten the shaft casing nut securely. (See Figures 2 and 3). Before coupling the tuning control shaft to the Receiver, turn the tuning control knob counter-clockwise to the mark below 55 on the scale. To couple the shaft, turn the knob counter-clockwise slowly until the shaft end is seated in the bushing and tighten the knurled casing nut securely with the fingers.

To adjust the setting of the control unit, after coupling the flexible shaft to the Receiver, turn the tuning control knob counter-clockwise as far as possible.

"A" BATTERY CONNECTIONS—Place the fuse and fuse insulator in the metal fuse housing in the control "A" lead. Couple this to the short Receiver lead and then connect the other "A" lead to the ammeter stud on the rear of the instrument board.

ANTENNA CONNECTIONS—When the radio is installed in a car having a top screen antenna, an under-car antenna, spare wheel antenna or an antenna having a similarly low capacitance (50 mmfd. to 450 mmfd.) — place the "connector

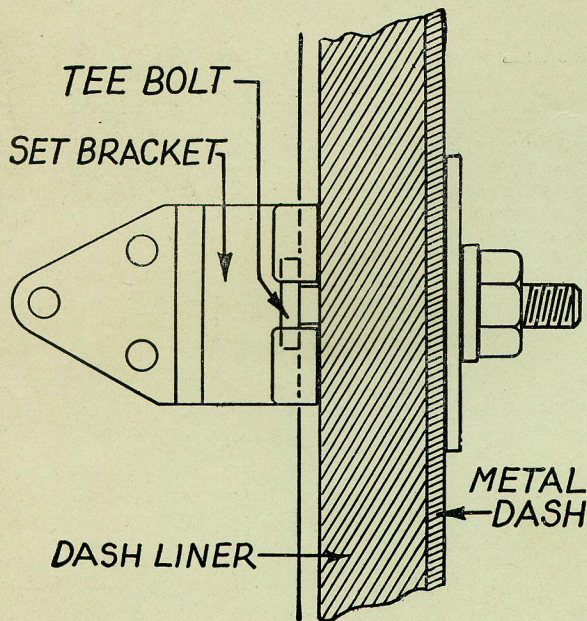


FIGURE 1

plug" in the antenna lead connector and then plug the antenna lead into the antenna lead connector. (See Figure 2).

When the radio is installed in a car having a metal insert top antenna, insulated door antenna, insulated trunk cover or an antenna having a similarly high capacitance (450 mmfd. to 2500 mmfd.) place the "condenser connector" in the antenna lead connector and then plug the antenna lead into the antenna lead connector.

LOCAL - DISTANCE SWITCH CONNECTION—The local-distance switch is on the bottom of the control head. Connect the black lead coming from the switch to the Receiver. The location of the local-distance connector is shown in Fig. 2.

ANTENNA COUPLING ADJUSTMENT—Turn on the radio and tune in a *weak broadcast signal at approximately 75* on the control scale. The volume control should be turned well up. With a small screw driver, adjust the antenna coupling condenser for the maximum signal. For location of the coupling condenser, see Figure 2.

MOTOR INTERFERENCE SUPPRESSION—Remove the coil-to-distributor high tension lead from the distributor. Cut two inches from the end of the lead and screw on the distributor resistor. Then plug the distributor resistor into the distributor cap.

While the standard distributor resistor can be used in most cases, there will be occasions when it will be necessary to use a double end screw type resistor (Part No. 4851) in the coil-to-distributor high tension lead, close to the distributor. Cars equipped with two ignition coils require two distributor resistors. Extra resistors can be obtained from the nearest Philco dealer or distributor.

Two interference condensers are furnished — one must be connected to the generator side of the cut-out, the other to the battery side of the primary of the ignition coil or to the ignition switch. The condenser bracket must be fastened securely to a grounded metal part of the car. The condenser on the generator usually can be fastened to the generator housing under the same screw that holds the cut-out, while the coil condenser can usually be fastened under the coil mounting bolts.

In some cases, it may be necessary to connect an additional condenser to the ammeter or to the dome light lead at the corner post.

On some cars a condenser can be used to advantage on the electric oil gauge or on the gas gauge. Connect the condenser to the terminal of the gauge and bolt the condenser securely to the frame or some other grounded part of the car.

Interference from electric clocks can be eliminated by connecting an interference condenser to the ammeter terminal.

Thirty inches of $\frac{1}{2}$ " copper braid is furnished for use as ground straps as required.

In some particularly stubborn cases, bonding the steering column to the dash with a short lead will be effective. Clean the paint from the steering column at the dash where it enters the motor compartment and solder on a short piece of braid, grounding this to the dash.

In other cases it may be necessary to ground the tubing and rods coming thru the dash in order to reduce the interference. (See Figure 4). Clean them with emery cloth and spot solder the braid, fastening the end under a convenient screw. When an under-car antenna is used it may be necessary to ground the exhaust pipe to the frame of the car with a piece of copper braid. The ground connection should be made ahead of the dash.

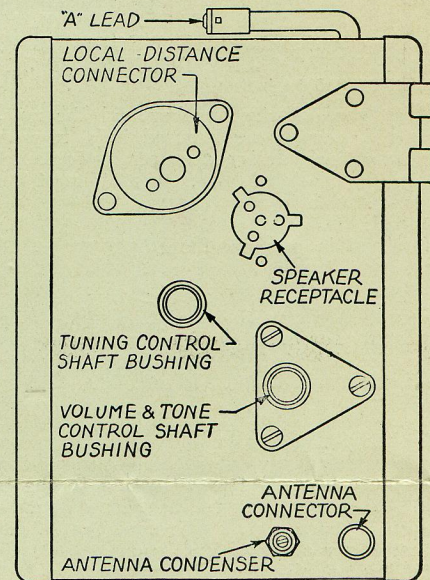


FIGURE 2

There may be some interference caused by an excessive gap between the distributor rotor and the high-tension contacts. This can be overcome by lengthening the contact end of the rotor. Place the metal end of the rotor on a steel block and peen or hammer it with a small machinist's hammer. Dress the end with a file so that it retains its original shape. The rotor should not brush or wipe the contacts, but should just clear them.

If the installation has been made carefully and the usual precautions observed, it should not be necessary to use spark plug resistors. In the event these operations do not reduce ignition disturbances to a satisfactory level, spark plug resistors should be installed. These can be obtained from the nearest Philco dealer or distributor.

OPERATION

The radio switch is in the center of the control above the dial opening. The "off" position is to the right, the "on" position, to the left. The left-hand knob controls the volume and tone, the right-hand knob the tuning. The local-distance switch is in the center of the control at the bottom.

Turn the radio "on." Allow the tubes to heat up, then adjust the volume control and tune in the various programs.

The numbers on the dial are channel numbers which, with the addition of "0" to the number correspond to the frequency in kilocycles. Adjust the volume to a suitable level and re-check the tuning. The Receiver must be tuned so that the maximum signal is obtained. Since the Receiver is extremely selective, it is of the utmost importance that the Receiver be tuned right on the station. Careless tuning off to one side even though the signal is still heard, results in very poor tone quality and very mushy reception.

To operate the tone control, pull out on the volume control knob. This disengages the volume control and engages the tone control. Turning the knob clockwise increases the high notes while turning counter-clockwise emphasizes the bass. Speech is usually clearest when the control is in the bright

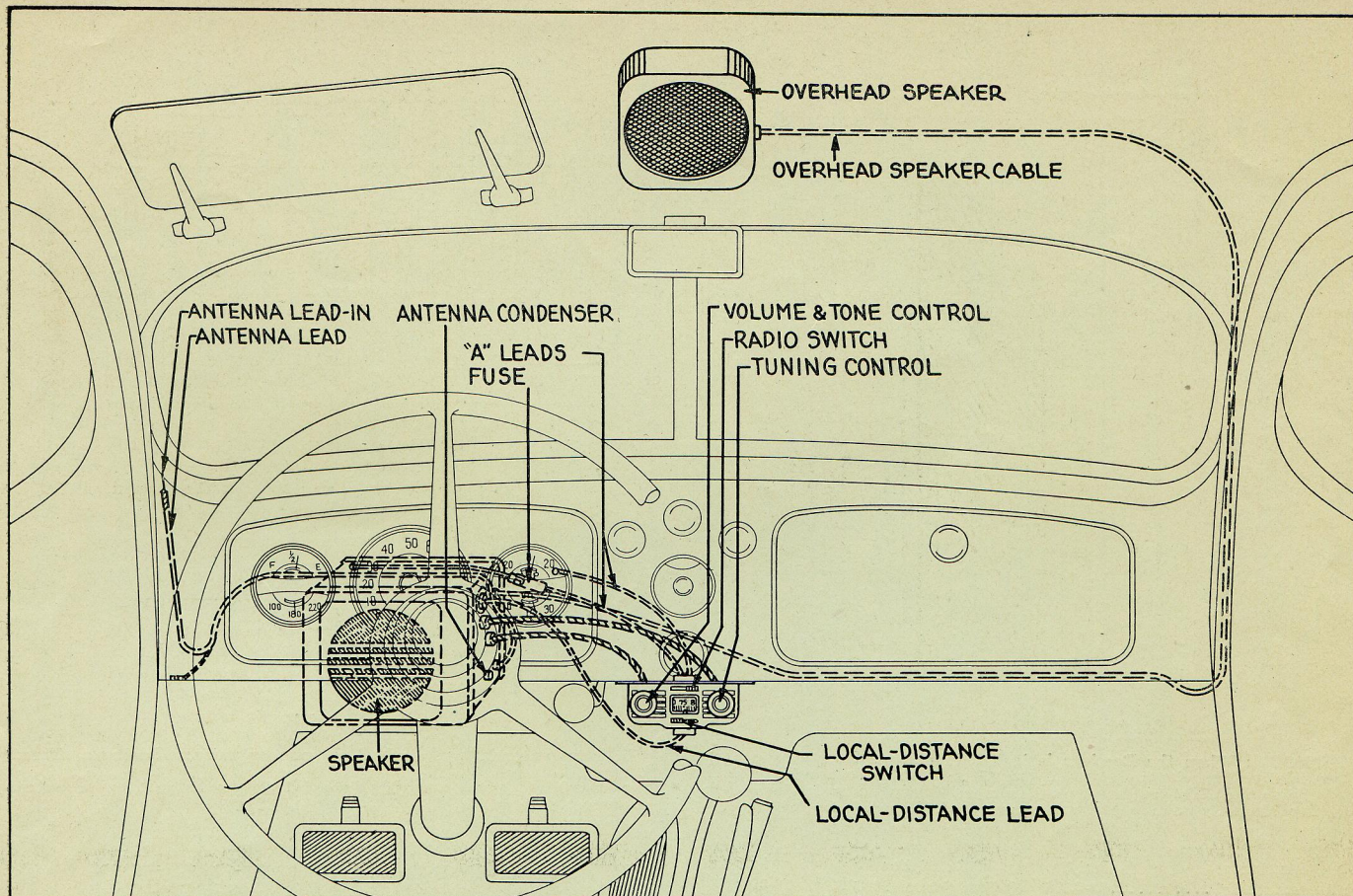


FIGURE 3

or brilliant position, while orchestras will sound best with the control set for more bass. After adjusting to the tone most pleasing, release the knob to restore the volume control action.

Another use of the tone control is as a static modifier. When driving through extremely noisy locations, the tone control should be set in the mellow or deep position. This will subdue the harsh rasping static.

When in the immediate vicinity of power lines or car lines, considerable man-made static or interference may be picked up. This man-made static as well as atmospheric static, is amplified along with the radio signal, but the effects of it can be minimized by tuning the Receiver to bring in the most powerful local station. Since the powerful local signal requires less amplification than other weaker signals, the automatic volume control in the Receiver reduces the amplification and enables the program to be received without most of the undesirable noises.

To make this further effective, the "local-distance" switch is provided in the Model 818. The "distance" position of the switch (in control head) is to the right, the "local" position to the left.

When the switch is in the "local" setting, the sensitivity of the Receiver is reduced and much quieter reception is attained.

With the switch in the "distance" setting, the Receiver is restored to its full sensitivity.

Except on very weak signals, the automatic volume control maintains the same volume level while driving along without continually manipulating the manual volume control, cuts out external interference, counteracts fading and prevents blasting of local stations while tuning. It is virtually impossible, however, to maintain satisfactory reception while driving under bridges or in places which are totally shielded, known as dead spots.

MAINTENANCE AND SERVICE

The Receiver is fully covered by the Standard Warranty (see below). Read it carefully. Should this Receiver or

the Receiver installation ever require attention, go immediately to your dealer or to the service station that made the installation for efficient service.

The installation record should be filled out by your dealer at the time the installation is made. Keep the record for your protection in case you ever do require service.

REPLACEMENT TUBES— Use only PHILCO High Efficiency Tubes for replacements.

REPLACEMENT PARTS— Use only genuine PHILCO replacement parts. Don't jeopardize the performance of your Receiver by using inferior parts.

DO NOT ATTEMPT TO ADJUST THE VIBRATOR— If service is ever required, go to your dealer or to the nearest authorized Philco Auto Radio Service Station.

**REMOVE PAINT FROM
UNDER SCREW HEAD**

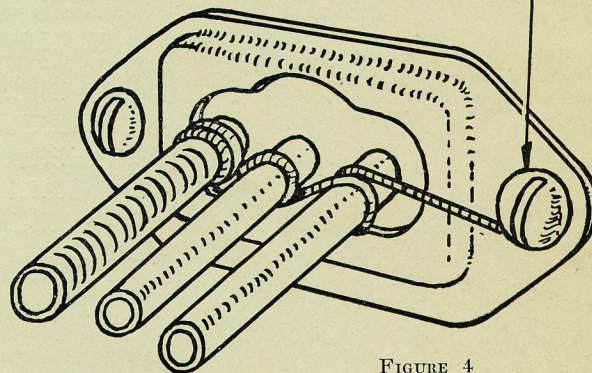
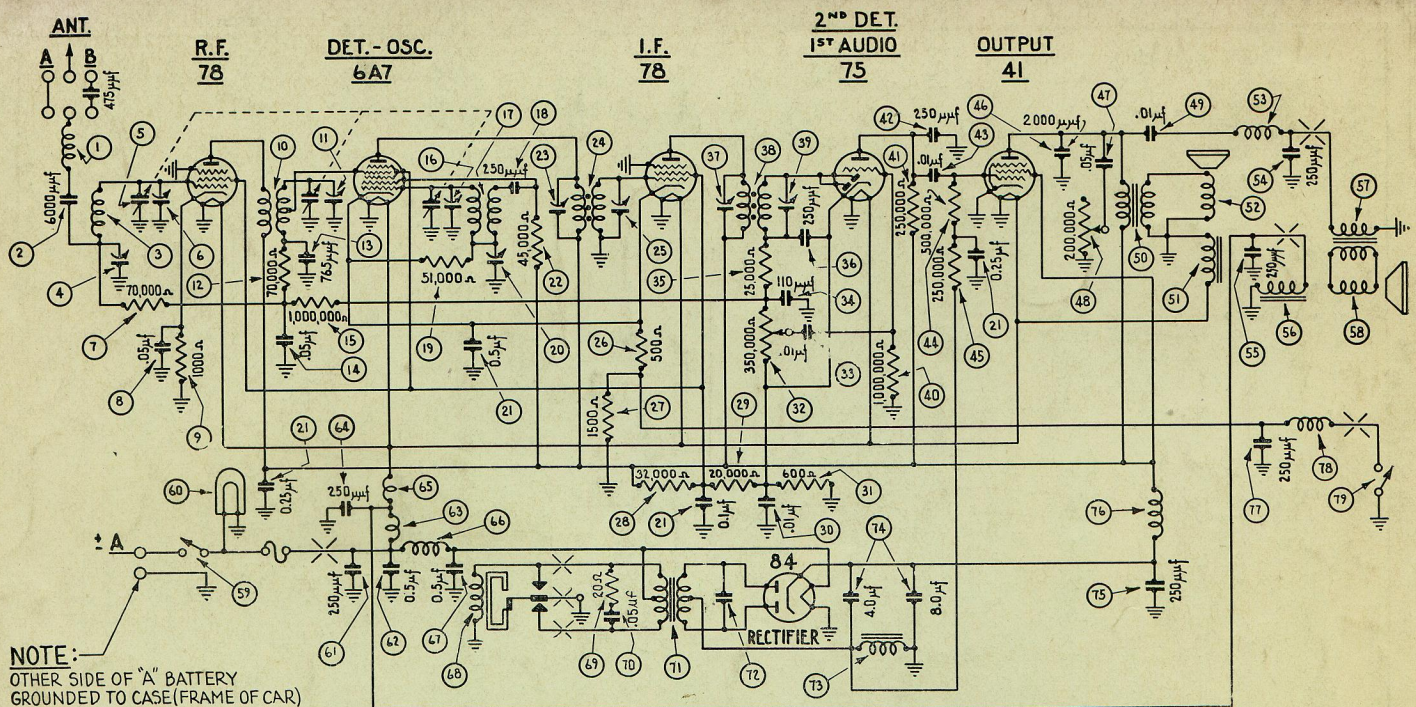


FIGURE 4

STANDARD WARRANTY

We warrant each new Radio Receiver and Speaker manufactured by us to be free from defects in material and workmanship under normal use and service, our obligation under this warranty being limited to making good at our factory or factory depots any part or parts thereof which shall, within ninety (90) days after delivery of such Receiver to the original purchaser, be returned to us with transportation charges prepaid, and which our examination shall disclose to our satisfaction to have been thus defective; this warranty being expressly in lieu of all other warranties obligations or liabilities on our part, and we neither assume nor authorize any representative or other person to assume for

us any other liability in connection with the sale of our Receivers or Speakers. This warranty shall not apply to any Receiver or Speaker which shall have been repaired or altered outside of our factory or factory depots in any way so as, in our judgment to affect its stability or reliability, nor which has been subject to misuse, negligence or accident, nor which has had the serial number altered, effaced or removed. Neither shall this warranty apply to any Receiver or Speaker which has been connected otherwise than in accordance with the instructions furnished by us.



I F = 260.K.C.

FIGURE 5

NOTE: When the Receiver is installed in a car having a top antenna, under-car antenna, spare wheel antenna or antenna having a similarly low relative capacitance (50 mmf. to 450 mmf.) use connector plug in "A".
When the Receiver is installed in a car having a metal insert top antenna, insulated door antenna, insulated trunk cover antenna or antenna having similarly high relative capacitance (450 mmf. to 2500 mmf.) use condenser plug in "B".

MODEL 818—PARTS LIST

No.	Description	Part No.	No.	Description	Part No.	No.	Description	Part No.	No.	Description	Part No.
1	Antenna Choke	38-7516	48	Tone Control (200,000 ohms)	33-5150	70	84TUBE RECTIFIER	72	71	65	9
2	Condenser (6000 mmf.)	30-4445	49	Condenser (.01 mfd.)	30-4381	71	75	67	64	69	45
3	Antenna Transformer	32-1984	50	Output Transformer	32-7495	72	76	68	65	70	46
4	Antenna Coupling Condenser	31-6082	51	Field Coil Assembly	36-3597	73	77	69	66	71	47
5	Tuning Condenser	31-1769	52	Cone & Voice Coil	36-3586	74	78	70	67	72	48
6	First Padder (on tun. cond.)	33-3017	53	Choke	32-1930	75	79	71	68	73	49
7	Resistor (70,000 ohms)	33-370334	54	Condenser (250 mmf.)	30-1032	76	80	72	69	74	50
8	Condenser (.05 mfd.)	30-4444	55	Condenser (250 mmf.)	30-1032	77	81	73	70	75	51
9	Resistor (1000 ohms)	33-3017	56	Field Coil Assembly (overhead speaker)	32-9236	78	82	74	71	76	52
10	R. F. Transformer	32-1985	57	Output Transformer (overhead speaker)	32-7507	79	83	75	72	77	53
11	Second Padder (on tun. cond.)	33-3017	58	Cone and Voice Coil (overhead speaker)	36-3526	80	84	76	73	78	54
12	Resistor (70,000 ohms)	33-370334	59	"On-Off" Switch	42-1160	81	85	77	74	79	55
13	Condenser (765 mmf.)	30-1069	60	Pilot Lamp	34-2039	82	86	78	75	80	56
14	Condenser (.05 mfd.)	3615-08G	61	Condenser (250 mmf.)	30-1032	83	87	79	76	81	57
15	Resistor (1,000,000 ohms)	33-510344	62	Condenser (.5 mfd.)	30-4015	84	88	80	77	82	58
16	Third Padder (on tun. cond.)	33-3017	63	"A" Choke	32-1432	85	89	81	78	83	59
17	Oscillator Transformer	32-1986	64	Condenser (250 mmf.)	30-1032	86	90	82	79	84	60
18	Condenser (250 mmf.)	30-1032	65	Filament Choke	32-2038	87	91	83	80	85	61
19	Resistor (51,000 ohms)	33-351344	66	Vibrator Choke	32-2039	88	92	84	81	86	62
20	Low Frequency Padder	31-6083	67	Condenser (.5 mfd.)	30-4015	89	93	85	82	87	63
21	Condenser (.1-25-.25-.5 mfd.)	30-4415	68	Vibrator	41-3170D	90	94	86	83	88	64
22	Resistor (45,000 ohms)	33-345344	69	Resistor (20 ohms)	33-020133	91	95	87	84	89	65
23	Padder (Pri. 1st I. F. Trans.)	32-2026	70	Condenser (.05 mfd.)	30-4444	92	96	88	85	90	66
24	First I. F. Transformer	32-2026	71	Power Transformer	32-7550	93	97	89	86	91	67
25	Padder (Sec. 1st I. F. Trans.)	33-1213	72	Condenser (7500 mmf.)	30-4420	94	98	90	87	92	68
26	Resistor (500 ohms)	33-1213	73	Filter Choke	32-7545	95	99	91	88	93	69
27	Resistor (1500 ohms)	33-215334	74	Filter Condenser (4-8 mfd.)	30-2150	96	100	92	89	94	70
28	Resistor (32,000 ohms)	33-332434	75	Condenser (250 mmf.)	30-1032	97	101	93	90	95	71
29	Resistor (20,000 ohms)	33-320334	76	"B" Choke	32-1281	98	102	94	91	96	72
30	Condenser (.01 mfd.)	33-3903-08G	77	Condenser (250 mmf.)	30-1032	99	103	95	92	97	73
31	Resistor (600 ohms)	33-1212	78	Choke	32-2063	100	104	96	93	98	74
32	Volume Control (350,000 ohms)	33-5149	79	Local-Distance Switch	42-1160	101	105	97	94	99	75
33	Condenser (.01 mfd.)	3903-0SU	80	Four Prong Socket	27-6044	102	106	98	95	100	76
34	Condenser (110 mmf.)	30-1031	81	Five Prong Socket	27-6035	103	107	99	96	101	77
35	Resistor (25,000 ohms)	33-325344	82	Six Prong Socket	27-6036	104	108	100	97	102	78
36	Condenser (250 mmf.)	30-1032	83	Seven Prong Socket	27-6037	105	109	101	98	103	79
37	Padder (Pri. 2nd I. F. Trans.)	32-2027	84	CB Speaker	36-1203	106	110	102	99	104	80
38	Second I. F. Transformer	32-2027	85	Idle Gear	28-7176	107	111	103	100	105	81
39	Padder (Sec. 2nd I. F. Trans.)	33-1213	86	Pinion Gear	28-7178	108	112	104	101	106	82
40	Resistor (1,000,000 ohms)	33-510344	87	Control Assembly	42-5537	109	113	105	102	107	83
41	Resistor (250,000 ohms)	33-424344	88	Tuning Control Shaft	28-8495	110	114	106	103	108	84
42	Condenser (250 mmf.)	30-1032	89	Volume Control Shaft	28-8499	111	115	107	104	109	85
43	Condenser (.01 mfd.)	3903-0SU	90	Pilot Lamp Assembly	38-7213	112	116	108	105	110	86
44	Resistor (500,000 ohms)	33-449344	91	Tuning and Volume Knob	27-4288	113	117	109	106	111	87
45	Resistor (250,000 ohms)	33-424344	92	Speaker Cable Assembly (overhead speaker)	41-3189	114	118	110	107	112	88
46	Condenser (2000 mmf.)	30-4177	93			115	119	111	108	113	89
47	Condenser (.05 mfd.)	8326-0SU	94			116	120	112	109	114	90

TRANSITONE AUTOMOBILE RADIO CORP.

PHILADELPHIA, PA.

Model 818—Installation Registration

Receiver Serial No. _____ Date _____
 Installed by _____ Make and Year of Car _____
 Owner's Name _____ Owner's Address _____
KEEP THIS INSTALLATION RECORD. IT IS IMPORTANT IN CASE YOU EVER REQUIRE SERVICE.